

isc Silicon NPN Power Transistor**2SD826****DESCRIPTION**

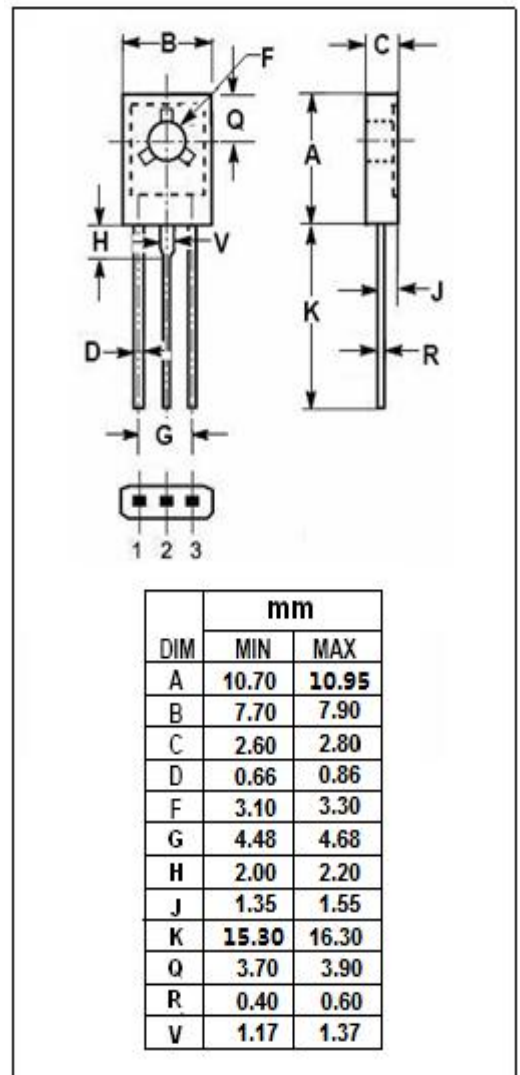
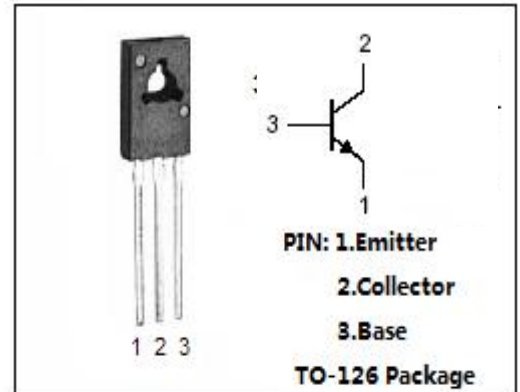
- Large Current Capability- $I_C = 5A$
- High DC Current Gain-
: $h_{FE} = 120-560 @ I_C = 0.5A$
- Low Saturation Voltage -
: $V_{CE(sat)} = 0.5V(\text{Max}) @ I_C = 3A, I_B = 60mA$
- Good Linearity of h_{FE}
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Suited for the output stage of 3 watts audio amplifier, voltage regulator, DC-DC converter and relay driver.

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
I_{CP}	Collector Current-Pulse $t = 100\text{ms}$	8	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.0	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	10	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD826****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 60mA			0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3A; I _B = 60mA			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 50V; I _E = 0			1.0	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 5V; I _C = 0			1.0	μ A
h _{FE-1}	DC Current Gain	I _C = 0.5A ; V _{CE} = 2V	120		560	
h _{FE-2}	DC Current Gain	I _C = 3A ; V _{CE} = 2V	95			
f _T	Current-Gain—Bandwidth Product	I _C = 50mA ; V _{CE} = 10V		120		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f _{test} = 1MHz		45		pF

Switching times

t _{on}	Turn-on Time	I _C = 2A I _{B1} = I _{B2} = 0.2A; R _L = 5 Ω ; V _{CC} = 10V; P _W = 20 μ s; Duty Cycle= 2%		30		ns
t _{stg}	Storage Time			300		ns
t _f	Fall Time			40		ns

◆ h_{FE-1} Classifications

E	F	G
120-200	160-320	280-560

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